

## PATENT SPECIFICATION



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## COMPLETE SPECIFICATION

**Improvements in or relating to Vehicle Bodies and Dashboards for use therein**

We, AUTO UNION AKTIENGESSELLSCHAFT, of 110, Scheffelstrasse, Chemnitz, Germany, a Company organised under the laws of Germany, do hereby declare the nature of this invention and in what manner the same is to be performed, to be particularly described and ascertained in and by the following statement:—

This invention relates to vehicle bodies and dashboards for use therein.

It is known to make dashboards for motor vehicles of a pressed synthetic resinous material, the dashboard extending over the whole width of the car. Such synthetic resinous material is composed of pulverised or tablet-shaped synthetic resin with fine granular wood fillers. This material, while easy to press, is not capable of bearing heavy stresses, especially tensile and bending stresses, and is therefore only used as an external panelling requiring a rigid support, such as a wood or steel member disposed below the windscreen and forming part of the framework of the assembly.

It has also been proposed to manufacture U-section or T-section bars of paper layers and synthetic resinous binding agents united under pressure, such bars being of equal cross-section throughout their length and being used in the construction of framework for car body assemblies in the place of the usual steel framework.

The object of the present invention is to provide an improved vehicle body and dashboard for use therein, enabling separate frame members in that part of the vehicle body assembly especially as a support to the dashboard, to be dispensed with.

According to the invention, a vehicle body has a dashboard pressed from a resinous synthetic substance containing laminated filling material and irregularly distributed filling material, said dashboard being mounted between the side wall members of the vehicle body so as to form a structural frame member of the vehicle body subjected to strains and stresses.

According to a further feature of the invention, a dashboard for a vehicle body

is made of a resinous synthetic substance wherein laminated filling material is incorporated so that the dashboard can be used to form a frame member of the vehicle body. The dashboard may be directly secured to the side pillars bordering the windcreens and forms with the front wall of the vehicle body a box-section member constituting a girder of great strength extending between the side walls of the vehicle body, such construction dispensing with the orthodox frame members usually found in this position. Further, the dashboard may be formed with recesses to receive instruments and to constitute pockets, such recesses also serving to increase the rigidity of the dashboard.

In order to make the invention more clearly understood, reference will now be made to the accompanying drawings wherein:—

Fig. 1 is a perspective inside view of the front part of a motor car body in chain line, the dashboard being shown in full lines;

Fig. 2 shows a dashboard in section such as on the line II—II of Fig. 1 with the pressing tools in position during manufacture of the dashboard;

Fig. 3 is a section on the line III—III of Fig. 1, and

Fig. 4 is a section through part of the dashboard on the line IV—IV of Fig. 1.

As shown in Figs. 1 to 4 the dashboard 1 pressed from laminated synthetic material is mounted to extend between the side walls of the car body and is secured to the side pillars 2 and 3 by means of screws or rivets 4. The dashboard is pressed in one piece and the lamination is obtained by superimposed paper or fabric strips which are saturated in synthetic resin and are rigidly united together by the pressing pressure. Pressing is effected by means of steel tools at a pressure of approximately 300 to 400 kilograms per square centimetre. In addition to the laminated filling materials irregularly distributed materials such as filings, shavings, chippings, cuttings or the like may be used, particularly at the edges or where rounded. The most

[Price 1/-]

suitable synthetic resins are condensation products of phenols or aromatic amines with formaldehyde. As shown in Fig. 3 the dashboard is substantially of U-section with a lower long leg 5 and an upper shorter leg 6. The leg 5 has a flange 7 formed with it in the pressing which reinforces it and at the same time serves for connection to the front wall 8 of the car body assembly which may likewise consist of laminated pressed synthetic resin material. The upper leg 6 supports and has connected to it the upper edge 9 of the front wall on which is also secured in position the lower windscreen edge. As shown in Fig. 4, for connection to the side pillars 2 and 3, the dashboard has both its ends formed with a flange 10 substantially parallel to the pillar face to which it is to be secured. Centrally of the dashboard there are formed shallow apertured depressions such as 11 and 12 to receive parts of fittings 13 and 14, e.g. for instruments, the necessary apertures being also formed in the pressing operation. At both sides of the apertures 11 and 12 there are pressed into the dashboard cavities 15 and 16 constituting pockets which can be used as storing spaces such as for gloves or other objects and which at the same time considerably increases the rigidity of the dashboard. As shown in Fig. 3, the dashboard in conjunction with the front wall 8 forms a box-section after the manner of a box-section girder, resulting in a structural element of great strength.

A manner of manufacturing the dashboard is illustrated in Fig. 2, showing a hydraulic press and a steel tool, the member 17 being the die and the member 18 being the pressing matrix.

It will be appreciated that in a vehicle body construction made in accordance with the present invention, the dashboard itself serves as a structural frame element of the body subjected to strains and stresses and enables separate frame members such as those usually provided below the windscreen to be dispensed with. This not only renders the vehicle body lighter but also simplifies assembling the body, because after the manufacture of the dashboard no subsequent work is required shaping to fit, the dashboard leaving the pressing with as accurate dimensions as would not be readily obtainable with other manners of manufacture. On the other hand, the material used for the dashboard as above described has practically the same properties of

strength as for example sheet steel, if the pressure used in pressing the dashboard is sufficiently high, approximately 300 to 400 kilograms per square centimetre being the requisite pressure. By the dashboard being directly secured to the side pillars forming part of the window frame, it gives support to two members subjected to particularly heavy stresses, thereby constituting a valuable frame member to which can also be secured the upper part of the front wall of the car body constituting the lower frame portion of the windscreen and supporting the latter.

Having now particularly described and ascertained the nature of our said invention and in what manner the same is to be performed, we declare that what we claim is:—

1. A vehicle body having a dashboard pressed from a resinous synthetic substance containing laminated filling material and irregularly distributed filling material, said dashboard being mounted between the side wall members of the vehicle body so as to form a structural frame member of the vehicle body subjected to strains and stresses.

2. A dashboard, for a vehicle body, pressed from a resinous synthetic substance wherein laminated filling material is incorporated for the purpose described.

3. A dashboard according to claim 2, or a vehicle body according to claim 1, characterised in that the laminated filling material comprises superimposed paper or fabric strips which are saturated in synthetic resin before being pressed.

4. A vehicle body according to claim 1 or 3 characterised in that the dashboard is directly secured to the side pillars bordering the windscreen and forms with the front wall of the vehicle body a box-section member for the purpose described.

5. A vehicle body according to claim 1, 3 or 4 characterised in that the dashboard is formed with recesses to receive instruments and to constitute pockets, such recesses also serving to increase the rigidity of the dashboard.

6. The constructional form of dashboard shown in the accompanying drawings and described with reference thereto for use in a vehicle body.

7. A vehicle body constructed and arranged substantially as described.

Dated this 27th day of November, 1937.

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[This Drawing is a reproduction of the Original on a reduced scale.]

Fig. 1.

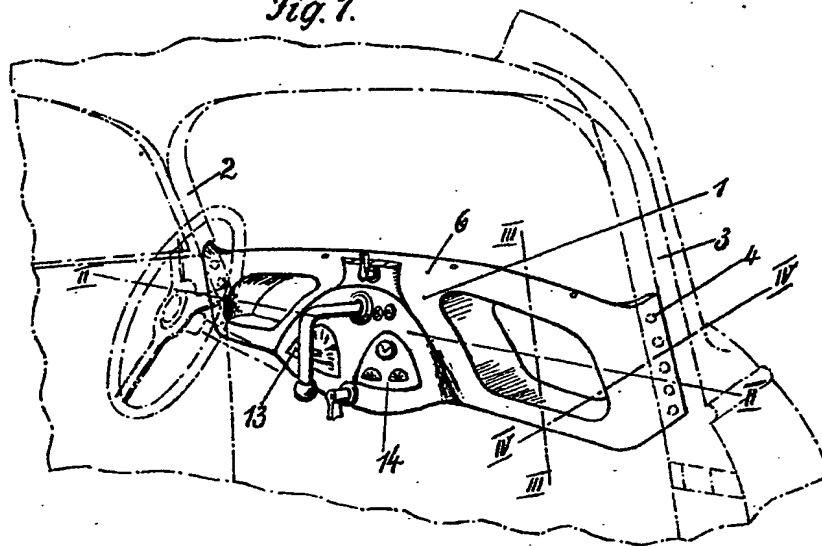


Fig. 2.

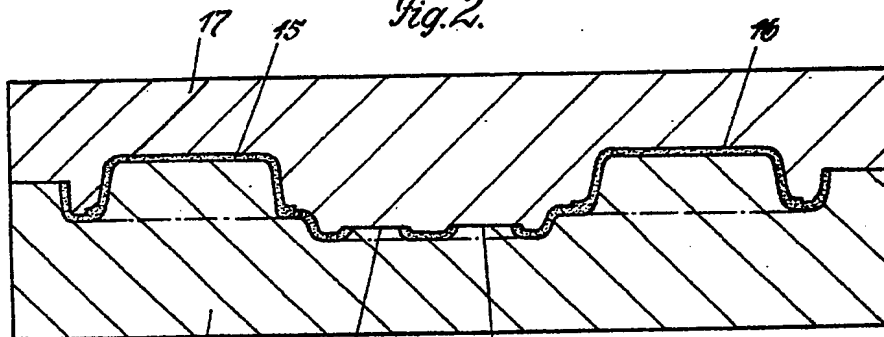


Fig. 3.

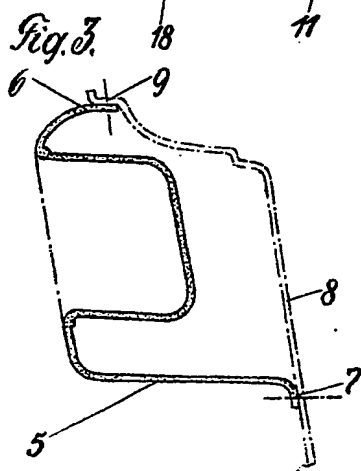


Fig. 4.

